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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

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“Step Out From the Old to the New”

IS 7628 (1975): Clamp, Stomach, Moynihan's Pattern [MHD 1:
Surgical Instruments]

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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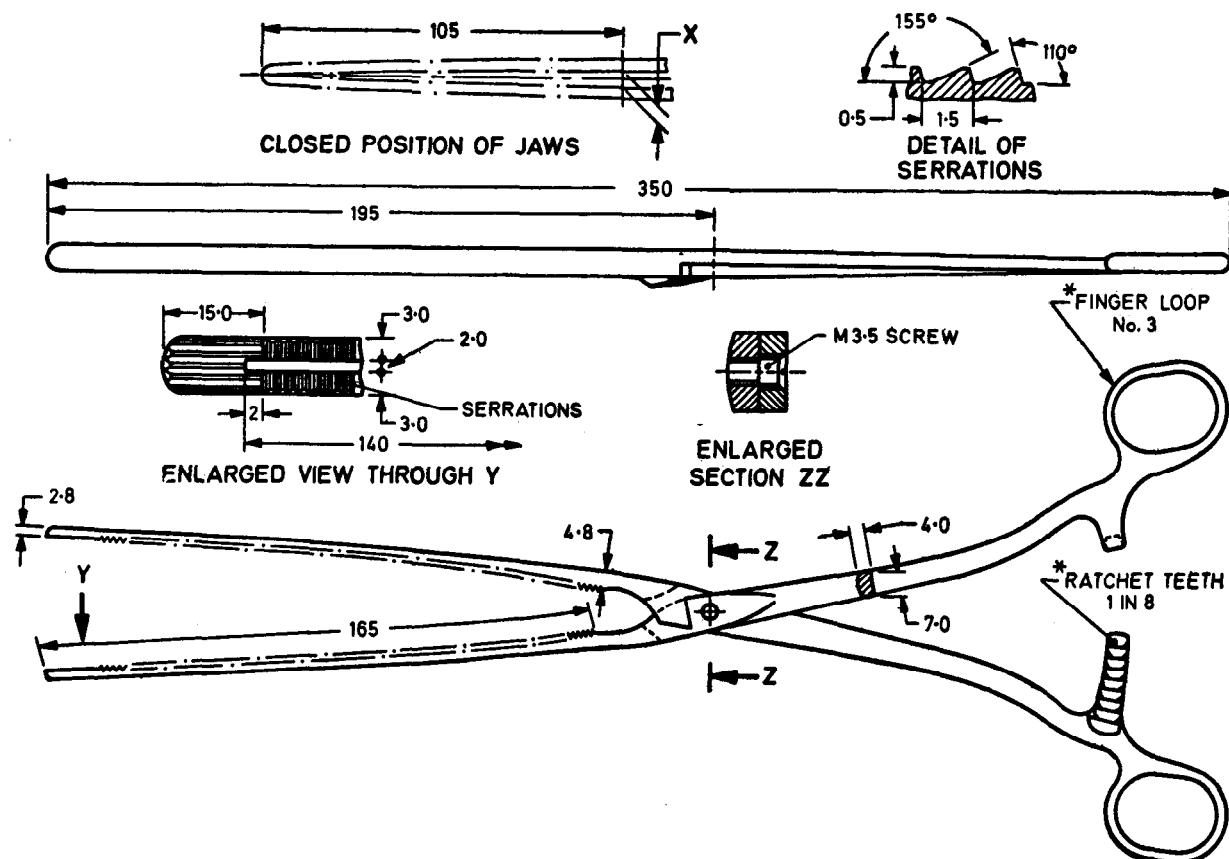


Indian Standard

SPECIFICATION FOR CLAMP, STOMACH, MOYNIHAN'S PATTERN

1. Scope — Covers dimensional and other requirements for Moynihan's pattern stomach clamp, used in general surgery.

2. Shape and Dimensions — As shown in Fig. 1.



*See IS : 3642-1966 General requirements for surgical instruments.

All dimensions in millimetres.

FIG. 1 CLAMP, STOMACH, MOYNIHAN'S PATTERN

2.1 A deviation of ± 2.5 percent shall be allowed on all dimensions.

2.2 Serrations — Shall have shape and dimensions as shown in Fig. 1. They shall conform to the requirements given in 3.1 to 3.3 of IS : 3642-1966.

2.3 Ratchet Teeth — Shall have a combination of 1 in 8 and shall conform to Section 3 of IS : 3642-1966.

2.4 Finger Loops — Shall conform to size 3 of Section 5 of IS : 3642-1966.

3. Material — Stainless steel conforming to Designation 30Cr13 of IS : 6603-1972 ' Specification for stainless steel bars and flats '.

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4. Workmanship and Finish

4.1 The surface of the clamp except the serrations shall be smooth and free from burrs, pits, cracks, scales and other surface flaws.

4.2 The serrations shall be uniform, regular, and evenly spaced and of even depth. The longitudinal serrations at the tip of the jaw shall engage with accuracy and precision and when the ratchet is closed on the first tooth, the engagement of the longitudinal serrations shall prevent lateral movement of the blades.

4.3 As closure of the ratchet proceeds from tooth to tooth the space between the blades shall diminish as described in **6.1**.

4.4 The arms shall move easily, fully and freely at the joint, without undue side play.

4.5 The instrument shall be polished bright and passivated.

5. Heat Treatment — The clamp shall be hardened and tempered to give a hardness of 430 to 490 HV.

6. Tests

6.1 Load Closure Test — The load required for engagement of various ratchet teeth along with maximum gap between the jaws at these ratchet positions are given below:

Ratchet Tooth Engaged	Force for Closure N (kgf approx)	Max Cap 'X' Between the Jaws (see Fig. 1) mm
First	7 ± 3 (0.7 ± 0.3)	7.6
Second	13.6 ± 5 (1.36 ± 0.5)	6.7
Third	20.5 ± 6 (2.05 ± 0.6)	4.3
Fourth	27.2 ± 8 (2.72 ± 0.8)	2.9
Fifth	30.8 ± 6 (3.08 ± 0.6)	1.7
Sixth	47.6 ± 5 (4.76 ± 0.5)	0.6
Seventh	61.2 ± 6 (6.12 ± 0.6)	0.2
Eighth	76.2 ± 8 (7.62 ± 0.8)	0.0

6.2 Flexibility — The flexibility shall be tested as given in **6.2.1** and **6.2.2**.

6.2.1 Grip a firm piece of rubber 12 mm thick between the terminal 50 mm length of the working end. Close the ratchet on the last tooth of the ratchet. On reopening the ratchet, the clamp shall show no sign of damage and shall not have acquired a new permanent set.

6.2.2 Hold one arm of the clamp at a point near the joint in a vice so that 200 mm of the arm (as measured from the surface of the vice jaws to the upper pole of the finger loop) protrudes above the vice.

By the application of a force at the upper pole of the finger loop, deflect the arm in a plane at right angles to that of the finger loop by 15 mm measured at the upper pole of the finger loop. On release of the deflecting force no permanent set shall be observed. Repeat the test on the same arm with the finger loop gripped in the vice at its equator. Apply the deflecting force to arm at a point 200 mm above the upper surface of the vice jaws.

Repeat the complete test on the other arm.

6.3 Corrosion Resistance Test — The clamp shall satisfy the boiling and autoclaving test mentioned in IS : 7531-1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'.

7. Marking — Mark with the manufacturer's name, initials and recognized trade-mark; and the words 'stainless steel'.

7.1 SI Certification Marking — Details available with the Indian Standards Institution.

8. Packing — Each clamp shall be wrapped in moisture-proof paper and put in card-board carton or packed in polyethylene bags. The clamps may also be packed as agreed to between the purchaser and the supplier.